

REPORT

CD NO.

DATE OF INFORMATION 1949

DATE DIST. 17 Feb 1950

NO. OF PAGES 1

SUPPLEMENT TO  
REPORT NO.

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SOURCE Izgrev, No 1617, 1949.

## BUILD NEW ATOM SMASHER

The German newspaper Tagliche Rundschau reports that Soviet scientists have constructed a new atom smasher, based on a theory developed by the Soviet physicist V. I. Vekhsler. The new machine, a synchrotron, exceeds the capacity of the American-built cyclotron and betatron.

Veksler worked out his theory on a new installation known as a phasotron which imparts considerably more energy to the particles than an ordinary cyclotron (up to 20 million electron-volts for deuterons, and up to 400 million electron-volts for alpha particles).

These new installations [presumably the synchrotron and the phasotron used together] permit nuclear transformations and the transformation of one element into another, including pair production of natural elements known heretofore only in their stable form.

Furthermore, the new installation allows one to measure atomic dimensions. The use of high-speed electrons also promotes the study of cosmic rays and the laboratory reproduction of cosmic particles, including varitrons, new elementary particles, discovered in cosmic rays by Soviet physicists Alikhanov and Ali-khanov.

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